

In the Claims:

Please amend the independent claims as indicated below. This listing of claims replaces all prior versions.

1. (currently amended) An arrangement for processing external-services data for use in a user facility that provides its users telephony-related services, the arrangement comprising:

an audio, video, and data signal bussing arrangement adapted to distribute audio, video, and data to designated points in the user facility;

a plurality of telephony-based appliances communicatively coupled to the bussing arrangement, wherein the plurality of appliances ~~are adapted to process~~ provide bi-directional telephony services using at least one of: audio, video, and data signals;

at least one data memory circuit adapted to store external-services data and adapted to store configuration data;

a programmable network interface unit (NIU) adapted to store external-services data in the memory circuit and to communicatively couple the stored external services data from the memory circuit to the plurality of appliances in the user facility via the bussing arrangement as a function of the configuration data in the memory circuit; and

a user input device adapted to access the data stored in the memory circuit, to program the programmable NIU by providing the configuration data and to command the NIU via the bussing arrangement to process the external-services data for use at a particular one of the plurality of appliances in the user facility.

2. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the user input device includes one of the plurality of appliances.

3. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the plurality of appliances includes at least one of: a TV, a phone, a computer, a printer, a videophone, a videocassette recorder, an analog recorder, a digital recorder, a stereo, a camera, a wireless phone, an intercom, an audio speaker, and a pager.

4. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the user input device includes at least one of: a TV, a phone, a computer, a videophone, a videocassette recorder, a wireless phone, an audio speaker, a pager, a remote control, a modem, a voice recognition system, an Internet access device, a keypad, and a touch screen.
5. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the bussing arrangement includes at least one of: a coaxial cable, a telephony line, a T1 line, an ISDN line, a DSL line, an infrared transmitter, a wireless transmitter, a telephone modem, a wireless modem, a cable modem, a broadband modem, and a computer network.
6. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the user input device includes a television remote adapted to select NIU commands from a display generated by the NIU and displayed on the television.
7. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the user input device includes a telephone adapted to select NIU commands from a command menu programmed into the NIU.
8. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the NIU is further adapted to configure the external services data for use at a particular one of the plurality of appliances.
9. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 8, wherein the external services data includes audio and video data, and wherein the NIU is adapted to configure the audio data for use at an audio appliance and to configure the video data for use at a video appliance.
10. (Previously Presented) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the NIU includes the data memory circuit.

11. (Previously Presented) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the NIU is adapted to store incoming external services data at the data memory circuit until a routing command is received from the user input device, and to route the external services data directly from the data memory circuit in response to the received routing command.

12. (Previously Presented) An arrangement for processing external-services data for use in a user facility, according to claim 11, wherein the user input device is adapted to communicate with the NIU and determine the type of external-services data that is stored.

13. (Previously Presented) An arrangement for processing external-services data for use in a user facility, according to claim 12, wherein the user input device is adapted to determine the source of the external-services data.

14. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 10, wherein the NIU is adapted to store configuration information in the data memory circuit, wherein the configuration information includes routing information for external services data.

15. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the external-services data includes data having a first data form, and wherein the NIU is adapted to convert the external services data into a second data form for use by a particular one of the plurality of appliances.

16. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 15, wherein the first data form includes packet-based data, and wherein the second data form includes non-packet-based data.

17. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 15, wherein the first data form includes word processing data, and wherein the second data form includes audio data.

18. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 17, wherein the first data form includes an email message, and wherein the NIU is adapted to read and convert the email into an audio message.

19. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 15, wherein the first data form includes audio data, and wherein the second data form includes word processing data.

20. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the user input device is further adapted to include a security code, and wherein the NIU is further adapted to respond only to commands having the security code.

21. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the plurality of appliances include a TV, and wherein NIU is adapted to display the configuration of the plurality of appliances on the TV screen.

22. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 21, and wherein the configuration data includes telephone data including at least one of: the telephone number assigned to the phone, call waiting options, caller ID options, answering options, forwarding options, message storage options, call blocking options, and call screening options.

23. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 21, wherein the user input device is adapted to command the NIU based upon the configuration display on the TV screen.

24. (Previously Presented) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein one of the plurality of appliances includes a display, and wherein the NIU is adapted to display the stored incoming external services data on the display.

25. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 24, wherein the user input device is adapted to command the NIU based upon the displayed incoming external services data.

26. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 25, wherein the NIU is adapted to display email, audio messages, and video messages, and wherein the user input device is adapted to respond to an input corresponding to the displayed information and to command the NIU to route the displayed information to a particular one of the plurality of appliances.

27. (Previously Presented) An arrangement for processing external-services data for use in a user facility, according to claim 1, further comprising a digital memory circuit coupled to the NIU, wherein the external-services data is digital data and is stored in the digital memory circuit.

28. (Previously Presented) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the external-services data is stored at a location external from the NIU.

29. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the NIU includes a processor adapted to function as an answering machine for incoming telephony calls.

30. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the user input device is coupled to the bussing arrangement and uses the bussing arrangement to command the NIU.

31. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 30, wherein the NIU is adapted to receive configuration information in the form of DTMF tones, wherein the bussing arrangement includes a two-wire analog system, and

wherein the user input device is adapted to send control signals to the NIU including DTMF tones.

32. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the user input device is adapted to send control signals to the NIU that are configured to enable the control of external-data services including at least one of: caller ID information, address book information, pay-per-view access information, downloadable multimedia information, dynamically allocable telephone numbers, call forwarding, message on hold, directory assistance, and household systems control information.

33. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the NIU includes a printed circuit board (PCB) having at least one general processor and at least one specific processor adapted to process video data.

34. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 33, wherein the PCB includes a RISC processor.

35. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 33, wherein the PCB includes a DSP processor.

36. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein each of the plurality of appliances is adapted to deliver status information signals to the NIU including the status of the appliance sending the signal, further comprising a user interface device adapted to access and provide the status information to a user.

37. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the plurality of appliances includes a microphone adapted for use in an intercom system.

38. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 37, further comprising a monitoring device coupled and adapted to receive audio signals from the microphone and, responsive to detecting an audio signal above a threshold level, send an alert signal to a user via the NIU.

39. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 38, wherein the microphone is located near an infant, and the system is used to monitor the infant.

40. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 39, wherein the alert includes a page signal.

41. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 38, wherein the microphone is adapted to monitor noise for security monitoring.

42. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 1, further comprising an appliance interface device coupled to an appliance and to the bussing arrangement and adapted to receive a first type of signal and convert the data signal to a second type of data signal.

43. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 42, wherein the appliance interface device is further adapted to receive a signal via a first type of communications line and to transmit the signal via a second type of communications line.

44. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 42, wherein the appliance interface device is programmable via a user input.

45. (Original) An arrangement for processing external-services data for use in a user facility, according to claim 42, wherein the appliance interface device is programmable by an external-services provider via the NIU.

46. (currently amended) A network interface system for interfacing different types of communication systems including a first user-based telephone communication system and a packet-based communication system, comprising:

- a data memory circuit adapted to store configuration data and packet-based data from the packet-based communication system;

- a telephony-based user communication device;

- a processor arrangement adapted to write configuration data into and read configuration data from the memory circuit and to provide data for presenting configuration information for accessing at the telephony-based user communication device, further adapted to process data received from, and exchange processed data between, the first user-based telephone communication system and the packet-based communication system, and, in response to the configuration data, also adapted to route selected information provided by the packet-based communication system and to route data stored at the data memory circuit to selected channels of the first user-based telephone communication system;

- user input means for inputting configuration-defining control signals, wherein the processor arrangement responds to the configuration-defining control signals by changing the configuration data in the memory circuit and by rerouting selected information provided by the packet-based communication system to selected channels of the first user-based telephone communication system according to the configuration-defining control signals.

47. (Original) A network interface system, according to claim 46, further comprising a network system coupled to the first user-based communications system.

48. (Original) A network interface system, according to claim 46, wherein the user input means includes at least one of: an IR key panel, a wall-mount unit for the system, a TV, a telephone, a computer, a videophone, a videocassette recorder, a wireless phone, a remote

control, a modem, a voice recognition system, an Internet access device, a keypad, and a touch screen.

49. (Original) A network interface system, according to claim 46, wherein the processor arrangement is further adapted to write configuration data into the memory circuit in response to signals received from the packet-based communication system

50. (Original) A network interface system, according to claim 46, wherein the processor arrangement is further adapted to permit reconfiguration in response to a user-provided security code.

51. (Original) A network interface system, according to claim 46, wherein the user communication device includes at least one of: a TV monitor, a printer, and computer.

52. (Original) A network interface system, according to claim 46, wherein the user communication device includes a voice generating unit adapted to produce prerecorded messages.

53. (Original) A network interface system, according to claim 46, wherein the user input means includes a computer adapted to communicate on the Internet.

54. (Original) A network interface system, according to claim 46, wherein the packet-based communication system includes at least one of: a cable modem, a wireless modem, a broadband modem, a telephone modem, a DSL, a T1 line, and a computer network.

55. (currently amended) A network interface system for interfacing different types of communication systems including a first user-based telephone communication system and a packet-based communication system, comprising:

a data memory circuit adapted to store data including packet-based data received via the packet-based communication system;

a telephony-based user communication device;

a processor arrangement adapted to write data-intercept select data into and read data-intercept select data from the memory circuit and to provide data for communicating with a user via the telephony-based communication device, further adapted to process data received from, and exchange processed data between, the first user-based telephone communication system and the packet-based communication system, and, in response to the data in the data memory circuit, also adapted to intercept information from the packet-based communication system and to store the intercepted information in the data memory circuit;

user means for inputting message-retrieval control signals, wherein the processor arrangement responds to the message-retrieval control signals by displaying messages from the data memory circuit.

56. (Original) A network interface system, according to claim 55, wherein the user input means is at least one of: an IR key panel, a wall-mount unit for the system, a TV, a telephone, a computer, a videophone, a videocassette recorder, a wireless phone, a remote control, a modem, a voice recognition system, an Internet access device, a keypad, and a touch screen.

57. (Original) A network interface system, according to claim 55, wherein the processor arrangement is further adapted to write data-intercept select data into the memory circuit in response to signals received from the packet-based communication system

58. (Original) A network interface system, according to claim 55, wherein the processor arrangement is further adapted to write data-intercept select data into the memory circuit in response to signals received from the input means.

59. (Original) A network interface system, according to claim 55, wherein the user communication device includes a TV monitor.

60. (Original) A network interface system, according to claim 55, wherein the user communication device includes a voice generating unit adapted to produce prerecorded messages.

61. (Original) A network interface system, according to claim 60, wherein the voice generating unit audibly produces the prerecorded messages over the user communication device.

62. (Original) A network interface system, according to claim 61, wherein the user communication device is communicating a first audio signal, and wherein the prerecorded messages are audibly produced at a sound level over that of the first audio signal.

63. (Original) A network interface system, according to claim 55, wherein the user communication device includes a computer adapted to communicate on the Internet.

64. (Original) A network interface system, according to claim 55, wherein the packet-based communication system includes at least one of: a cable modem, a wireless modem, a broadband modem, a telephone modem, a DSL, a T1 line, and a computer network.

65. (currently amended) A method for controlling communications data in a communications system having a NIU, a user interface device, a plurality of telephony-based communications appliances, and a bussing arrangement the method comprising:

- programming the NIU from the user interface device via the bussing arrangement with configuration information for external-services data;

- receiving external-services data at the NIU;

- storing the received external-services data in a memory circuit;

- responsive to the configuration information, configuring the stored external-services data and transferring the configured data via the bussing arrangement to one of the telephony-based communications appliances; and

- receiving the transferred external-services data at the one telephony-based communications appliance.

66. (Original) The method of claim 65, wherein programming the data receiving unit with configuration information includes programming routing information for routing the external-services data to particular ones of a plurality of communications devices.

67. (Original) The method of claim 66, wherein the particular ones of a plurality of communications devices include a telephony device, and wherein the routing data includes the assignment of a particular telephone number to the telephony device.

68. (Original) The method of claim 66, wherein the particular ones of a plurality of communications devices include an Internet device, and wherein the routing data includes the assignment of a particular Internet protocol address to the Internet device.

69. (Original) The method of claim 66, wherein the particular ones of a plurality of communications devices include a TV, and wherein the routing data includes the assignment of a particular television subscription package to the TV.

70. (Original) The method of claim 65, wherein using the user interface device and programming the NIU with configuration information for external-services data includes programming from an external-services provider location, wherein the configuration information controls the type of external services that the NIU passes to the plurality of communications devices.

71. (Original) The method of claim 70, wherein the external-services data includes television data, and wherein the external-services provider location programs the NIU with a television subscription package.

72. (Original) The method of claim 71, wherein the television subscription package includes a specified number of television sets that can use the television data.

73. (Original) The method of claim 71, wherein the television subscription package includes a pay-per-view event.

74. (Original) The method of claim 70, wherein the external-services data includes packet-based data, and wherein the external-services provider location programs the NIU with a packet-based access package.

75. (Original) The method of claim 70, wherein the external-services data includes telephony-based data, and wherein the external-services provider location programs the NIU with a telephony-based access package.